Refiners may try to meet octane demand by boosting severity of cracking—a step which entails some reduction in yield.

B&M indicates that the refining industry could meet the 1979 limit of 0.5 gm. if capacity cost pass-throughs were allowed and few delays were encountered in refinery siting; on the whole, however, B&M expects gasoline shortages in 1979.

Imports are a second option that might ease the gasoline crunch over the next few years. But both Pace and the B&M studies concluded that imports would not be able to make up the shortfall. Nearly half of the estimated 300,000 bpd. of imports that would be required would have to come from Europe which is having problems of its own with gasoline. Moreover, it would be high priced gasoline.

Aromatic imports could offer some help to petrochemical producers and under normal conditions, notes one Texas company, imports could make up the difference between rising benzene consumption and a somewhat slower increase in benzene capacity. But whether large amounts of benzene would be available under crisis conditions is problematical.

Toluene stockpiling also offers some potential for alleviating possible benzene shortages next year and later. Some stockpiling is now thought to be taking place in anticipation of a future crunch. Toluene hoarding, however, implies that there will be no wait at the TDA unit and that ample storage capacity exists. And there's a risk involved if EPA decides to be generous with the lead phase-down schedule—a development that could push toluene prices downward.

Full scale use of new manganese antiknock additives would reduce the gasoline shortfall to a limited degree. B&M estimates that at the 0.07-gm./gal. level, the 1977 summer shortfall could be cut from an estimated 646,000 bpd. to 561,000. At that level, the additives boost RON by 1.8 and motor octane by 1 octane. Problem: the only present manganese antiknock supplier (Ethyl) may not be able to supply the estimated 5.4 million lbs. of antiknock additive (as Mn metal) that will be required in 1977.

Neither the petroleum refining industry, now facing a serious Congressional demand for divestiture, nor the government want a replay of the 1973-1974 gasoline shortages, climbing prices and consumer outrage. Yet, that's what the handwriting on the wall suggests if the EPA sticks to a tight phasedown. And in the process, a good part of the petrochemical industry could be seriously hurt.

End of trail for mirex?

The state of Mississippi, sole U.S. manufacturer of mirex, has told the Environmental Protection Agency it wants to phase out production and use of the controversial pesticide by June 30, 1978. Recent tests have indicated the material is harmful both to health and the environment, and as a result, EPA has been considering banning the pesticide.

In a letter to EPA, Jim Buck Ross, Mississippi Commissioner of Agriculture, said the state wants to replace "current mirex registrations with an unquestionably safe registered material as quickly as possible."

Mirex, a chlorinated hydrocarbon, is an ingredient in a poisonous bait used to kill destructive fire ants in nine Southern states. It has been in use for 14 years (sprayed in the air or applied to the ground), but Mississippi began producing the pesticide only last spring, when it purchased a mirex manufacturing plant from Allied Chemical.

Recent tests have shown it to be hazardous (*CW, July 28, p. 23*). Studies at the National Cancer Institute have found it to be a cancer agent in rodents; environmental tests show small amounts of mirex may degrade into Kepone, a toxic pesticide; and EPA found mirex in more than one-fourth of human tissue samples from the South.

Ross cited the proposed phase-out as an opportunity for the state to conduct research on less-harmful fire ant killers. Although he claimed that mirex is not "too harmful to the environment," he conceded that it is a persistent pesticide.

A less toxic mirex formula (10:5) has been developed and, under the state's plan, would replace the current 4X bait by 1977. Ross also said he is "most encouraged" by tests on a new biodegradable mirex bait. Two EPA-cleared insecticides, dimethoate and diazonan, are also being considered for fire ant control.

But the use of mirex remains controversial. There has been strong opposition, for instance, to the planned spraying of 700,000 acres in three Alabama counties. Especially loud protest centers on the possibiity of contamination of the Cahaba River, which supplies water to Birmingham and surrounding counties.

Alabama has been plagued by fire ants, which have been known to attack animals and children. Although the pests usually don't eat crops, they threaten farming because their tall mounds make plowing difficult.

The program in Alabama was originally scheduled for Sept 13. It has been delayed until early October. The delay, according to John Bloch of the Alabama Dept. of Agriculture, was caused by the late delivery of mirex supplies from Hooker Chemical.

Hooker stopped manufacturing mirex in 1967. Recent shipments presumably would have had to come from inventories.

Heat over herbicide

Agent Chemical (Houston) is reconsidering plans to dispose of a toxic herbicide contaminant—2,3,7,8-tetrachlorodibenzo-*para*-dioxin (TCDD)—in a landfill built to hold toxic materials in West Covina, Calif., because of public controversy. The firm had applied for a state health department disposal permit.

The company has developed a process for removing TCDD from agent orange, a defoliant formerly used in Vietnam, in an effort to reprocess the Air Force's 2.3-million-gal. stockpile and make the material suitable for commercial use. But controversy has occurred recently over TCDD contamination in Seveso, Italy, when an incident related to trichlorophenol production occurred at a nearby chemical plant (*CW, Aug. 11, p. 13*).

The latest dispute apparently began when concerned citizens deluged West Covina city officials with telephone calls after reading newspaper accounts that nine cannisters of charcoal filter elements containing TCDD from the herbicide had been shipped to landfill operator Ben K. Kazarian Co. (Wilmington, Calif.) for experimental tests. West Covina officials and the landfill firm have "mutually agreed" to eliminate the landfill for consideration as a disposal site.

Agent Chemical says it has not yet been notified by California authorities, but expects that the permits will not be issued. It notes that the entire 2.3 million gal. of herbicide contain about 40 lbs. of dioxin, and each cannister contains about an 18th of an ounce after processing.

The company removes TCDD by adsorption on activated coconut charcoal at about 100 C at atmospheric pressure. Columns are 6 in. in diameter, 6 ft. long and have ⅜-in.-thick steel walls. When the requisite amount of dioxin is adsorbed, the column is removed from the system, welded shut at both ends, primed, painted and covered with a 1-in. layer of polyethylene.

The company estimates that these containers would retain integrity in a landfill for about 1,000 years.

HONS 037369

top of the news

GE settles on PCBs

General Electric and New York State's Environmental Conservation Dept. last week agreed on terms of a $7-million program to deal with polychlorinated biphenyls in the Hudson River. Under terms of a consent order, GE will contribute $4 million. The agreement settles legal proceedings brought against GE in September 1975 because of discharges of PCBs at its Hudson Falls and Fort Edward, N.Y., capacitor manufacturing plants (*CW, Aug. 4, p. 34*).

The agreement provides for the company to make a $3-million lump-sum conbritution to the state environmental department within 60 days, to be used in a $6-million program directed by the agency to monitor and take remedial action against PCB contamination in the Hudson River. GE will also perform $1 million in research on PCBs, and grant the state agency nonexclusive rights to use results of the studies. Included: $400,000 to research the environmental compatibility of its substitute non-PCB dielectric capacitor fluids; $400,000 for research and pilot-plant studies for means to remove and treat PCBs; and $200,000 to study the effect on the environment of three substances that may be hazardous.

In addition, GE agreed to halt use of PCBs in capacitor manufacturing by July 1, 1977. The firm will also reduce discharges from its Hudson Falls and Fort Edward plants to an average of 1 gram/day following completion of a $3.5-million treatment facility in April 1977.

Monsanto's Search: Meanwhile, Monsanto disclosed more details of a medical search of cancer incidence among its present and former plant workers exposed to PCBs. George Roush, director of Monsanto's Medical and Environmental Health Dept., reported that the latest preliminary results show no cases of either malignant melanoma or pancreatic cancer among the 300 present or former workers at the Sauget, Ill., plant—the firm's only U.S. facility that makes PCB products.

In comparison, Roush notes, a recent Mobil Oil study found three cases of melanoma and two cases of pancreatic cancer among 72 employees exposed to PCBs in a New Jersey Mobil plant.

Previously, Monsanto's study found seven cases of lung cancer among 50 deceased workers investigated, which exceeds the national average of 2.7 (*CW, Sept. 8, p. 26*).

TIRE PRODUCTION is expected to be back to normal levels within two weeks.

Back to making tires

As the longest rubber strike in tire industry history ended last week, three of the "Big Four" tire makers agreed that 1976 could be the largest passenger tire sales year ever.

Goodrich and Uniroyal each reached agreement with the United Rubber Workers on new three-year contracts, ending the strike that idled almost 70,000 union members since Apr. 21. Ratification by local unions sent Goodrich and Uniroyal employees back to work Sept. 8.

Workers at Goodyear and Firestone returned to work last month when those companies reached contract settlements (*CW, Sept. 1, p. 13*).

Terms of both the Uniroyal and Goodrich agreements followed the industry's basic economic pattern established in Washington last month by the union and Firestone. In addition to a basic three-year wage increase of $1.35/hour and a cost-of-living adjustment, the contracts call for extra wage boosts to compensate for "carve-outs," or money taken out of hourly wages in the 1973 contract.

The return of the Goodrich and Uniroyal workers means that now all U.S.-based tire plants, including Armstrong, Richardson and Dayton, have settled or are in the process of ratifying new contract agreements. Tire production is expected to be normal within a week or two.

In spite of the prolonged strike, Goodyear economists report that this year will be a "banner year for the tire industry, with auto tire sales equaling their highest single-year increase in 30 years."

More than 191 million auto tires will be sold in the U.S. this year, the company said—nearly 21.5 million more than were sold in 1975. Only once in the last 30 years—in 1968—has the increase been as great, the economists stated.

Goodyear attributed the "tremendous demand for auto tires" to a resurgence in new-car sales, recession-delayed purchases, and the sale of replacement tires for 1973 cars. The company said the industry was able to meet this demand despite the strike because of large inventories, "resourcefulness" in production and increased tire imports.

Curbs on vitamin ads

Hudson Pharmaceutical has agreed to a Federal Trade Commission consent order, which prohibits the company from directing its advertising for a children's vitamin to juvenile audiences.

The order is based on an FTC complaint alleging that Hudson's comic book and television ads for the Spider-Man vitamin are "unfair and deceptive" because they use a child's hero figure to endorse the product. "Such advertising can induce children to take excessive amounts of vitamins, which can be dangerous to their health," FTC said.

The FTC order specifically prohibits Hudson from running any Spider-Man vitamin advertisements "whose dominant appeal is to children," and from televising ads "which utilize Spider-Man or other hero figures" before 9:05 p.m.

The FTC agreement applies only to ads for children's vitamins manufactured by Hudson. Other vitamin makers, such as Miles Laboratories and Bristol-Myers, say they withdrew vitamin advertising directed to children several years ago.

A Hudson official reported the company expects no sales loss as a result of the restriction and said that Hudson plans to run future advertisements for Spider-Man vitamins, omitting the hero figure. He said Hudson has always directed ads to adults, never to children.

FTC has also been involved with a separate petition filed with the Federal Communications Commission by numerous state attorneys general requesting a ban on televised over-the-counter drug advertisements between 6 a.m. and 9 p.m. The term "drug" as defined in the petition includes products such as vitamins, toothpaste, cough drops and shampoos, as well as more traditional drug items, an FCC official said.

No deadline for a ruling has been scheduled.

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